

(1) producing a halogen-terminated vinyl polymer by atom transfer radical polymerization and

(2) converting the terminal halogen of said polymer to a phenol group-containing substituent group.

5. (Amended) The heat-curable composition according to Claim 1 wherein the (A) component vinyl polymer has its main chain produced by polymerizing a (meth) acrylic monomer.

8. (Amended) The heat-curable composition according to Claim 1 wherein the (A) component vinyl polymer has its main chain produced by polymerizing a styrenic monomer.

9. (Amended) The heat-curable composition according to Claim 1 wherein the (A) component vinyl polymer has a ratio (M_w/M_n) of weight average molecular weight (M_w) and number average molecular weight (M_n) as measured by gel permeation chromatography of less than 1.8.

10. (Amended) The heat curable composition according to Claim 1 wherein the (A) component vinyl polymer has a number average molecular weight of 500 to 100,000.

11. (Amended) A shaped article as obtainable by curing the heat-curable composition according to Claim 1.

14. (Amended) The polymer according to Claim 12 wherein the (A) component vinyl polymer has its main chain produced by the atom transfer radical polymerization of a vinyl monomer.

15. (Amended) The polymer according to Claim 12

wherein the (A) component vinyl polymer is obtainable by the procedure comprising

(1) producing a halogen-terminated vinyl polymer by atom transfer radical polymerization and

(2) converting the terminal halogen of said polymer to a phenol group-containing substituent group.

16. (Amended) The polymer according to Claim 12

wherein the (A) component vinyl polymer has its main chain produced by polymerizing a (meth) acrylic monomer.

19. (Amended) The polymer according to Claim 12

wherein the (A) component vinyl polymer has its main chain produced by polymerizing a styrenic monomer.

20. (Amended) The polymer according to Claim 12

wherein the (A) component vinyl polymer has a ratio (M_w/M_n) of weight average molecular weight (M_w) and number average molecular weight (M_n) as measured by gel permeation chromatography of less than 1.8.

21. (Amended) The polymer according to Claim 12

wherein the (A) component vinyl polymer has a number average molecular weight of 500 to 100,000.

22. (Amended) The polymer according to Claim 12